U.S. Department of Transportation
Federal Aviation Administration

SPEAKER'S KIT

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August 1990

TO: Users of the Speaker's Kit

Enclosed are several brief speeches -- or "modular units" -- specifically designed for FAA Local Coordinators.

We kept these units as short as possible. While each can stand alone -- and serve as the title or topic of your speech -- they are primarily designed to form only a part, perhaps the nucleus, of your remarks. (These topics, by the way, were selected by our Regional Public Affairs Officers as most likely to interest well-informed citizens, i.e., members of a Kiwanis or Rotary Club. We will appreciate your suggestions for other topics -- and any comments concerning this material.)

No matter which unit you select, your presentation will be less "canned" -- and more effective -- if you focus on the interests of your audience. Try to put a local "spin" on your remarks. Weave local color into the speech material. For example, tell your listeners who you are, what you do, and how this relates to this written material. Most important, try to describe how this information affects them, their families, and their community.

If you find it difficult to inject this kind of local color directly into this material, at least make reference to your job at the beginning of your remarks. Before you finish, consider devoting as much as half your speech to describing your work, and that of your facility. Because what you do and how you do it -- and your credibility and professionalism -- will have far more impact on your listeners than any words we can put in your mouth.

When appropriate, describe services provided by other FAA facilities in the area, but remember: your audience is not interested in the FAA as an organization (they could care less!), but what we do for them. In this spirit, consider inviting your listeners to visit/tour a local FAA facility to better understand how we serve aviation, their local community and, most important, their safety when they fly.

Leave time for a Q&A session at the end. (Hint: to get questions started, discuss some in advance with a few friends in the audience, or your host; they may spare you that embarrassing silence when no one can think of a question to ask!) Excuse yourself from responding to questions of a controversial nature, or outside your area of expertise. Suggest these be put in writing (include name and mailing address or daytime phone), so you can forward them to the appropriate FAA office for response.

The Administrator's Fact Book can help you respond to most questions with up-to-date facts and figures: carry a copy to each presentation. Here again, use local or regional statistics when possible: this helps bring your message home to your listeners. How has traffic grown at their airport in the past five years? What are growth trends in general aviation in their community, state or region? What does this mean to them?

As noted above, we would appreciate your suggestions concerning (1) how effective you find this material, (2) any additional topics you would like us to prepare, (3) how we could improve/increase FAA's communications with local civic organizations and communities in general. If it is easier to do this by telephone, please call Fred Pelzman, APA-200, FTS 267-3481.

Hugh L O'Neill

HUGH L. O'NEILL
Assistant Administrator
Public Affairs

LOCAL COORDINATOR'S SPEAKER'S
KIT
#1 FAA OVERVIEW
AUGUST 1990

FIRST OF ALL, LET'S TAKE A QUICK LOOK AT THE FEDERAL AVIATION ADMINISTRATION. AND LET'S START WITH WHAT IT DOES:

* IT OPERATES THE AIR TRAFFIC CONTROL, SURVEILLANCE, COMMUNICATION, AND NAVIGATION SYSTEMS.

* IT ESTABLISHES AND ENFORCES REGULATIONS GOVERNING ALL FLIGHT ACTIVITIES.

* IT OVERSEES THE TRAINING AND LICENSING OF PILOTS, TECHNICIANS, AND MECHANICS.

* IT CERTIFIES THE DESIGN OF NEW AIRCRAFT.

* IT SETS AND ENFORCES STANDARDS FOR AIRCRAFT MAINTENANCE.

* IT REGULATES AIR COMMERCE.

* IT PROMOTES CIVIL AVIATION AND A NATIONAL SYSTEM OF AIRPORTS.

* IT HELPS DEVELOP NEW TECHNOLOGY.

I COULD GO ON AND ON. BUT THAT'S ENOUGH TO GIVE YOU AN IDEA OF THE MIND-BOGGLING RANGE OF THE FAA'S ACTIVITIES.

I SHOULD NOTE, HOWEVER, THAT VIRTUALLY EVERYTHING THE FAA DOES IS RELATED TO ITS ONE OVER-RIDING RESPONSIBILITY -- WHICH IS TO ASSURE FLYING SAFETY.

WE WANT TO MAKE SURE THAT AMERICANS FLY IN SAFE AIRCRAFT. WE WANT TO MAKE SURE THAT PILOTS ARE WELL-TRAINED AND PROFICIENT. WE WANT TO MAKE SURE THAT PLANES STAY AWAY FROM DANGEROUS WEATHER. AND, MOST IMPORTANTLY, WE WANT TO MAKE SURE THAT THEY DON'T RUN INTO EACH OTHER.

NOW THAT'S A PRETTY BIG JOB. AMERICA HAS THE LARGEST AIR COMMERCE SYSTEM IN THE WORLD, WITH THOUSANDS OF PLANES IN THE AIR AT ANY ONE TIME.

TO HANDLE THIS TREMENDOUS WORKLOAD, THE FAA HAS A TOTAL OF 51,607 EMPLOYEES, MOST OF THEM STATIONED OUT IN THE AGENCY'S NINE REGIONS, WITH WELL OVER HALF INVOLVED IN AIR TRAFFIC CONTROL. THESE INCLUDE:

* 24,393 AIR TRAFFIC CONTROL SPECIALISTS;

* 17,259 IN THE CONTROLLER WORKFORCE;

* 6,456 ELECTRONICS TECHNICIANS;

* 2,710 ENGINEERS; AND

* 2,812 INSPECTORS.

WHAT DO THESE PEOPLE DO?

* THEY STAFF 400 AIRPORT CONTROL TOWERS;

* THEY RUN 22 AIR TRAFFIC CENTERS THAT CONTROL CROSS-COUNTRY FLIGHTS;

* THEY OPERATE 139 FLIGHT SERVICE STATIONS THAT HELP PILOTS IN A VARIETY OF WAYS;

* AND THEY MAINTAIN THOUSANDS OF COMPUTERS, RADARS, RADIOS, AND NAVIGATION DEVICES.

IN ADDITION, THE FAA OPERATES A TECHNOLOGICAL TEST AND EVALUATION FACILITY, NEAR ATLANTIC CITY, N.J., AND A TRAINING CENTER IN OKLAHOMA CITY, OKLAHOMA.

HOW MUCH DOES ALL THIS COST? THIS YEAR THE BUDGET TOTALS $6.6 BILLION, WITH MORE THAN HALF (57 PERCENT) COMING FROM FEES PAID BY THE AIRLINES AND OTHER USERS OF THE SYSTEM.

I COULD SPEND THE REST OF THE DAY TELLING YOU ABOUT THE FAA. BUT I THINK THAT'S ENOUGH TO GIVE YOU AN IDEA OF THE SIZE AND SCOPE OF THE AGENCY.

LOCAL COORDINATOR'S SPEAKER'S KIT
#2 HOW SAFE IS IT TO FLY?
AUGUST 1990

I'LL BET THAT EVERYONE IN THIS ROOM HAS SEEN NEWS STORIES THAT GIVE THE IMPRESSION THAT OUR AIRLINERS ...

* ARE GETTING TOO OLD,

* OR THAT THEY'RE FLOWN BY UNDERPAID, INEXPERIENCED PILOTS,

* OR THAT THEY'RE MONITORED BY TIRED, OVERWORKED FLIGHT CONTROLLERS,

* OR THAT THE AIR TRAFFIC CONTROL SYSTEM IS OVERLOADED WITH FAR MORE FLIGHTS THAN IT CAN HANDLE SAFELY.

IT'S NO WONDER THAT PEOPLE WORRY ABOUT HOW SAFE IT IS TO FLY. THOSE STORIES PRESENT A PRETTY BLEAK PICTURE.

THE DEREGULATION OF THE AIRLINES, IN 1978, CREATED AN EXPLOSION IN AIR TRAVEL. THERE ARE MORE AIRLINES TODAY. THERE ARE MORE FLIGHTS AND MORE PLANES IN THE AIR. AND THERE ARE MILLIONS MORE PASSENGERS THAN THERE WERE JUST A FEW YEARS AGO.

YET THESE TREMENDOUS INCREASES IN AIRLINE ACTIVITY HAVE BEEN ACCOMPANIED BY A STEADILY DECREASING FATALITY RATE.

LET'S LOOK AT THE FACTS FOR OUR SCHEDULED AIRLINES:

* IN THE TEN YEARS FOLLOWING DEREGULATION, 1979 THROUGH 1988, THE ACCIDENT RATE PER 100,000 AIRCRAFT-HOURS FLOWN DECLINED BY 16 PERCENT.

* DURING THE DECADE OF THE EIGHTIES ONE FATAL ACCIDENT OCCURRED IN 1.4 MILLION SCHEDULED AIRLINE DEPARTURES.

THE NEW YORK TIMES SAYS THAT "FLYING REMAINS ONE OF THE SAFEST WAYS TO TRAVEL." I WOULD ADD: "IT'S A LOT SAFER THAN DRIVING." YOU ARE 19 TIMES SAFER ON A SCHEDULED AIRLINER THAN YOU ARE IN A CAR.

OVER THE PAST TEN YEARS, AIRLINE ACCIDENTS KILLED AN AVERAGE OF 84 (83.6) PEOPLE PER YEAR. ABOUT THE SAME NUMBER ARE KILLED IN ANIMAL-DRAWN VEHICLE ACCIDENTS AND ABOUT TWICE AS MANY DROWN IN BATHTUBS EVERY YEAR. BUT BUGGY-RIDE AND BATHTUB ACCIDENTS DON'T MAKE NATIONAL HEADLINES.

AND NEITHER DO ACCIDENTS AT HOME. YET TWENTY-SEVEN TIMES AS MANY PEOPLE WERE KILLED IN ACCIDENTS AT HOME IN ONE YEAR, 1988, AS WERE KILLED IN AIRLINE ACCIDENTS IN THE DECADE OF THE EIGHTIES.

I'M NOT SAYING THAT AIRLINE ACCIDENTS SHOULDN'T GET THE HEADLINE -- OR THAT BUGGY-RIDE ACCIDENTS SHOULD GET NATIONAL COVERAGE. WHAT I'M SAYING IS THAT STORIES ABOUT AIRLINE SAFETY USUALLY DON'T GIVE YOU MUCH PERSPECTIVE. AND THAT'S WHY A LOT OF PEOPLE ARE NEEDLESSLY CONCERNED ABOUT HOW SAFE IT IS TO FLY.

FLYING IS ONE OF THE SAFEST FORMS OF TRANSPORTATION AND IT IS GETTING SAFER. WE'LL PROBABLY NEVER REACH 100 PERCENT SAFETY -- BUT THAT'S OUR GOAL, NEVERTHELESS.

LOCAL COORDINATOR'S SPEAKER'S
KIT
#3 AIRPORT CONGESTION
AUGUST 1990

AIRPORT CONGESTION GRIPPED GENERAL AWARENESS NEARLY A QUARTER OF A CENTURY AGO WHEN LIFE MAGAZINE FEATURED A FULL PAGE PICTURE SHOWING AN "ELEPHANT TRAIN" OF JETS LINED UP ON A TAXIWAY AT NEW YORK'S JFK AIRPORT, WAITING TO TAKE OFF FOR EUROPE. WHAT AN AMAZEMENT IT WAS, ALL THOSE BIG AIRPLANES -- NOW THE DIMINISHED 707'S AND DC-8'S --WAITING IN LINE, JUST TO TAKE OFF. IMAGINE. OF COURSE, IT WAS ESSENTIALLY A FRIDAY NIGHT PHENOMENON.

TO SAY A LOT HAS HAPPENED IN AVIATION SINCE THEN IS TO STEAL A LINE FROM RIP VAN WINKLE. THE JET AGE, WHICH HAD REALLY JUST BEGUN, CAPPED A GROWING AMERICAN ECONOMY IN THE '60'S AND '70'S AND BROUGHT AIR TRAVEL TO MOST AMERICANS. DEREGULATION IN THE '80'S LOWERED FARES, EXPANDED MARKETS FURTHER, BROUGHT NEW PLAYERS INTO THE AIRLINE BUSINESS AND INTENSIFIED COMPETITION FOR EVERYBODY.

PASSENGER ENPLANEMENTS WENT FROM 58.9 MILLION ANNUALLY IN 1960 TO 480 MILLION LAST YEAR (1989). THE NUMBER OF FLIGHTS UNDER INSTRUMENT RULES, WHICH IS THE CASE FOR ALL AIRLINE FLIGHTS, WENT FROM 9.8 MILLION TO 33 MILLION IN THAT SAME PERIOD. THE AIRLINE FLEET DOUBLED IN SIZE.

BUT WHERE ALL THIS AERONAUTICAL ACTIVITY STARTED AND ENDED -- THE AIRPORTS -- CHANGED VERY LITTLE. WASHINGTON'S DULLES AIRPORT OPENED IN 1963, THE DALLAS-FORT WORTH AIRPORT SOON AFTER AND THE FORT MYERS REGIONAL AIRPORT JUST A FEW YEARS AGO. OTHER THAN THOSE, THERE HAVEN'T BEEN ANY NEW MAJOR AIRPORTS, AND VERY FEW NEW RUNWAYS AT EXISTING AIRPORTS.

AS PART OF THE PROBLEM OF GETTING A QUART OF MILK IN A PINT BOTTLE -- TOO MANY AIRPLANES AT A NUMBER OF OUR KEY AIRPORTS -- AIRLINES FOUND THEY HAD TO DEVELOP THE "HUB AND SPOKE" CONCEPT TO INCREASE LOAD FACTORS TO COMPETE SUCCESSFULLY. IN A HUB OPERATION, AIRLINES DON'T JUST FLY PASSENGERS FROM A TO B. THEY FLY THEM FIRST TO C -- A HUB -- FILL UP THE AIRPLANE WITH OTHER PEOPLE ALSO TRYING TO GET TO B, THEN GO ON WITH A FULLER AIRPLANE.

THESE ARE CALLED INTERLINE PASSENGERS AND AT AIRPORTS SUCH AS CHICAGO'S O'HARE OR ATLANTA, THEY MAKE UP CONSIDERABLY MORE THAN HALF OF THE TOTAL NUMBER, PASSENGERS WHO LANDED THERE TO CHANGE PLANES BUT WHO HAD NO DESIRE TO GO TO EITHER CITY. THERE ARE ADVANTAGES TO BOTH THE AIRLINES AND TO PASSENGERS IN HUB OPERATIONS, BUT RELIEVING AIRPORT CONGESTION SURE ISN'T ONE OF THEM.

TO WORK EFFECTIVELY ON THE PROBLEM OF AIRPORT CONGESTION, A GROWING NATIONAL PROBLEM IF NOT YET A CRISIS, SOME COMMON TERMS OF REFERENCE HAD TO BE ESTABLISHED. ONE OF THEM IS "20,000 AIRCRAFT HOURS OF DELAY," MEANING AIRLINES AND THEIR PASSENGERS MIGHT SUFFER THAT MUCH DELAY EACH YEAR AT A SPECIFIC AIRPORT.

THAT LEVEL OF DELAY IS NOT CATASTROPHIC -- O'HARE HAS REACHED 150,000 HOURS OF AIRCRAFT DELAY IN ONE YEAR -- BUT IT IS A SIGN OF REAL, AND EXPENSIVE TROUBLE.

TWENTY MAJOR U. S. AIRPORTS HAVE NOW REACHED THAT "TROUBLE" LEVEL. IN 10 YEARS TIME, IF THERE ARE NO SIGNIFICANT CHANGES -- SUCH AS PEOPLE DECIDING THEY DON'T REALLY MIND STARTING THEIR TRIPS IN THE MIDDLE OF THE NIGHT -- OR AIRPORT IMPROVEMENTS, IT IS EXPECTED THAT THE NUMBER OF AIRPORTS IN THE DELAY-AND-CONGESTION TROUBLE CATEGORY WILL DOUBLE, TO 40, BECAUSE THE NUMBER OF ENPLANED PASSENGERS IS FORECAST TO RISE FROM 450 MILLION ANNUALLY NOW TO MORE THAN 800 MILLION BY THE YEAR 2000.

IN THE BROADEST TERMS, SOLUTIONS TO THIS NATIONAL TRANSPORTATION PROBLEM FALL INTO TWO CATEGORIES, ONE, PROVIDING NEW RUNWAYS AT ESTABLISHED AIRPORTS OR BUILDING NEW AIRPORTS, THE SECOND; GETTING MORE CAPACITY OUT OF THE RUNWAYS AND AIRPORTS WE'VE GOT.

STUDIES ARE UNDERWAY FOR PERHAPS NEW AIRPORTS IN A NUMBER OF METROPOLITIAN AREAS, INCLUDING BOSTON, MIAMI, MINNESOTA, CHICAGO, PHOENIX, DENVER, ATLANTA, SAN DIEGO AND AUSTIN, TO MENTION A FEW.

MANY PROJECTS ARE GOING FORWARD NOW TO INCREASE RUNWAY CAPACITY, SUCH AS REDUCING SPACING BETWEEN AIRPLANES OF THE SAME SIZE IN THE LANDING TRAIL; PERMITTING TRIPLE SIMULTANEOUS INSTRUMENT APPROACHES AT SOME VERY LARGE AIRPORTS, NOW AUTHORIZED AT DALLAS-FORT WORTH, AND, PERHAPS, PERMITTING SIMULTANEOUS INSTRUMENT APPROACHES ON TWO PARALLEL RUNWAYS ONLY 3000 FEET APART AS CONTRASTED TO 4300 FEET, WHICH IS PRESENTLY REQUIRED.

OPERATIONAL TESTS ARE GOING ON NOW AND IF THE NEW STANDARD IS ACCEPTED, CAPACITY AT 10 OF OUR MAJOR AIRPORTS WILL BE INCREASED THREE TO FIVE OPERATIONS AN HOUR.

THE POSSIBILITY OF USING THE NEW MICROWAVE LANDING SYSTEM TO PROVIDE CURVED APPROACHES TO NEW "STUB" RUNWAYS EXCLUSIVELY FOR SMALLER COMMUTER AIRCRAFT IS ANOTHER APPROACH, MUCH STUDIED AND ARGUED ABOUT. IF THE CONCEPT PROVES FEASIBLE, IT WOULD BE AN IMPORTANT OPTION: 34.9 PER CENT OF TOTAL TRAFFIC AT PHILADELPHIA IS COMMUTER AIRCRAFT, 33 PER CENT AT BOSTON'S LOGAN FIELD. TO GET THEM OUT OF THE STREAM OF HEAVY JETS INBOUND FOR THE MAIN RUNWAYS WOULD BE VERY HELPFUL.

SADLY, NOTHING IS IN SIGHT TO SOLVE THE WAKE TURBULENCE PHENOMENON, WHICH MAKES IT NECESSARY TO SPACE AIRPLANES OF DIFFERENT SIZE AS MUCH AS SIX MILES APART IN THE FINAL LANDING PHASE.

NOR HAVE WE LEARNED TO DEAL MORE EFFICIENTLY WITH THUNDERSTORMS. STAY OUT OF THEM WAS OLD RULE OF THUMB; STAY AWAY FROM THEM HAS BEEN ADDED WITH INCREASED KNOWLEDGE OF MICROBURSTS.

BUT IF ALL THE PROJECTS UNDERWAY, AND ALL THE REALISTIC PROJECTS PROPOSED, ALL WORKED -- SUCH A MIRACLE -- WOULD THE CONGESTION AND DELAY PROBLEM BE SOLVED AFTER THE YEAR 2000? NO, NOT EVEN CLOSE.

THERE ARE SO MANY INTANGIBLES AND PLAIN UNKNOWNS IN THIS EQUATION, NONE OF THE ESTABLISHED FORECASTERS --THOSE WITH TRACK RECORDS, INDUSTRY AND GOVERNMENT -- REALLY WANT TO BE PINNED DOWN.

THEIR INFORMAL ESTIMATES RUN FROM 10 PER CENT OF THE FUTURE REQUIREMENT COULD BE MET IF EVERY REMEDIAL PROGRAM, UNDERWAY AND PLANNED, WORKED, TO A HIGH OF 40 PER CENT.

IF THERE IS A GENERAL CONSENSUS THAT EXTRACTING THE VERY LAST BIT OF CAPACITY FROM PRESENT RUNWAYS AND AIRPORTS IS NOT GOING TO SOLVE THE PROBLEM IN THE NEXT CENTURY, THERE IS NO LONG-TERM ANSWER OTHER THAN ADDITIONAL RUNWAYS AND AIRPORTS. AND SINCE THERE ISN'T MUCH ROOM FOR ADDITIONAL RUNWAYS AT EXISTING AIRPORTS -- PEOPLE SEEM TO CROWD AROUND AIRPORTS, ALL THE WHILE COMPLAINING ABOUT THE NOISE -- THE POSSIBILITY OF AT LEAST SOME NEW AIRPORTS SURVIVES AS THE LONG-TERM HOPE, NOT COUNTING HIGH SPEED RAIL IN THE NORTHEAST CORRIDOR.

AS IF THE PROSPECT OF BUILDING A NEW MAJOR AIRPORT ANYWHERE ISN'T FORMIDABLE ENOUGH -- ONLY THE PEOPLE OF DENVER AND AUSTIN ARE DETERMINED TO DO IT -- THE AIRPORTS HAVE TO BE IN THE RIGHT PLACE. THERE ARE A LOT OF AIRPORTS OUT ON THE GRAND PRAIRIE NOW WITH EXCESS CAPACITY.

WHO IS GOING TO PAY FOR A MAJOR NEW AIRPORT -- THINK IN TERMS OF A BILLION DOLLARS -- IS REALLY A TOUGHER QUESTION THAN DECIDING IN WHAT GENERAL AREA THEY SHOULD BE BUILT. AN OVERVIEW OF THE SYSTEM AS IT EXISTS TODAY SUGGESTS WHERE THEY ARE NEEDED. BEING CLOSE TO POPULATION CENTERS, OR WHERE PEOPLE DEMONSTRATE THEY WANT TO TRAVEL, IS THE CLEAREST GUIDE.

IN ADDITION TO PROVIDING MORE AIRPORT CAPACITY NEW AIRPORTS WILL ALSO HELP RELIEVE CONGESTION ON THE GROUNDSIDE, RATHER THAN CONGESTING THEM EVEN FURTHER.

AS DIFFICULT AS THE PROBLEM IS, THERE ARE SIGNS THAT THE MOST IMAGINATIVE PUBLIC FIGURES ARE BEGINNING TO GRAPPLE WITH IT SERIOUSLY. TRANSPORTATION LEADERS IN ILLINOIS AND INDIANA, FOR EXAMPLE, WITH ENTHUSIASTIC SUPPORT FROM FAA, HAVE BEGUN STUDIES ON ANOTHER AIRPORT TO AUGMENT O'HARE AND MIDWAY.

SO I CLOSE ON A NOTE OF GUARDED OPTIMISM. SHORT-TERM PROJECTS TO EASE THE CONGESTION PROBLEM ARE GOING FORWARD FULL BORE; THE LONG-TERM SOLUTION -- NEW RUNWAYS AND, MOST CRITICALLY, NEW AIRPORTS -- IS BEGINNING TO GET THE ATTENTION IT DESERVES IF THE U. S. AIR TRANSPORTATION SYSTEM IS TO SERVE THE PEOPLE WHO WILL WANT TO FLY IN THE NEXT CENTURY AND REMAIN THE BEST IN THE WORLD.

LOCAL COORDINATOR'S SPEAKER'S
KIT
#4 AGING AIRCRAFT
AUGUST 1990

BEFORE WE GET INTO WHAT AGING AIRCRAFT MEANS TO YOU PERSONALLY--SINCE I'M SURE MOST OF YOU ARE AIR TRAVELERS -- LET ME SAY FAA STILL OPERATES A DC-3 -- N-34 -- BUILT 45 YEARS AGO AND STILL GOING STRONG. NOBODY THINKS IT'S UNSAFE. SLOW, YES, BUT NOT UNSAFE.

SO THERE IS NOTHING BAD ABOUT AGE ITSELF AS IT RELATES TO AIRPLANES. IT'S WHAT HAPPENS TO AIRPLANES, STARTING WITH THE QUALITY OF MAINTENANCE AND INSPECTION, AND THEN WHAT KIND OF STRESS THE AIRPLANE UNDERGOES, WHERE AND HOW OFTEN.

FROM THE BEGINNING, U. S. AIRLINERS HAVE BEEN BUILT UNDER A "FAIL SAFE" PHILOSOPHY. IN THIS, A STRUCTURAL FAULT MAY APPEAR, BUT THE AIRPLANE DESIGN PROVIDES A REDUNDANT, LOAD-BEARING PATH THAT PREVENTS CATASTROPHE. BY DESIGN, THE FAULT -- WHICH MAY HAVE SURFACED DURING FLIGHT -- IS DISCOVERED DURING NORMAL INSPECTION ON THE GROUND AND REPAIRED. NO DISASTER BECAUSE OF THE ALTERNATE LOAD-BEARING PATH.

THIS STILL WORKS FINE FOR THE DC-3 AND OTHER AIRPLANES, BUT THE TRAGEDY APRIL 28, 1988, WHEN A LARGE PART OF THE TOP OF AN ALOHA AIRLINES BOEING 737 JET RIPPED OFF AT 24,000 FEET, GENERATED NEW THINKING AND GREAT CHANGES.

YOU MAY REMEMBER THE NATIONAL TRANSPORTATION SAFETY BOARD DECIDED THAT THE PROBABLE CAUSE OF THE ACCIDENT WAS THE AIRLINE'S "FAILURE TO DETECT FATIGUE DAMAGE AND DISBONDING OF SKIN OVERLAP JOINTS..." FAA WAS CITED FOR POOR OVERSIGHT OF AIRLINE MAINTENANCE PROCEDURES AND BOEING FOR NOT PROVIDING A "FIX" FOR THE CRACKING PROBLEM THAT HAD BEEN DISCOVERED YEARS BEFORE.

TODAY THAT WOULDN'T HAPPEN. IN THE NEW APPROACH TO DEALING WITH OLDER AIRCRAFT, THE FAA IS REQUIRING THE AIRLINES TO MAKE STRENGTHENING MODIFICATIONS TO BASIC CRITICAL STRUCTURES TO PREVENT FATIGUE PROBLEMS AS AIRCRAFT APPROACH 20 YEARS OF SERVICE, THE "ECONOMIC DESIGN GOAL."

IN ADDITION, SOME PARTS, SUCH AS THE LANDING GEAR, MUST BE REPLACED AFTER A SPECIFIED NUMBER OF FLIGHT HOURS OR CYCLES.

THE EXTENT OF DAMAGE IN THE ALOHA ACCIDENT WAS A SHOCK.
BENJAMIN A. COSGROVE, BOEING SENIOR VICE PRESIDENT FOR ENGINEERING, TOLD AVIATION WEEK MAGAZINE, HE WAS "DUMBFOUNDED." HE EXPLAINED "...WE'VE ALL BEEN SAYING AN AIRPLANE WOULD GIVE US WARNING."

INDUSTRY AND THE GOVERNMENT REACTED WITH REMARKABLE SPEED, PARTLY BECAUSE A LOT OF KNOWLEDGEABLE AVIATION PEOPLE -- DUMBFOUNDED OVER THE ALOHA ACCIDENT OR NOT -- WERE ALREADY CONCERNED ABOUT HOW WELL THE OLD THEORIES WOULD HOLD UP FOR AGING JETS. THEY WERE CONCERNED ABOUT HOW MUCH THEY REALLY KNEW SINCE JETS HADN'T BEEN AROUND LONG ENOUGH TO GET VERY OLD. BOEING ITSELF HAD STARTED A SURVEY OF ITS OLDER JETS IN 1986 FOLLOWING A COUPLE OF NONCATASTROPHIC, BUT DISTURBING INCIDENTS OF STRUCTURAL FAILURE OF NON-PRESSURIZED CONTROL SURFACES.

JET FUSELAGES UNDERGO GREAT STRESS DURING THE PRESSURIZATION/ DEPRESSURIZATION CYCLE, SOMETHING THAT NEVER HAPPENED TO A DC-3. DC-3S ARE NOT PRESSURIZED. PROBABLY FEW DC-3S EVER WORKED AS HARD AS THAT ALOHA JET, EITHER. IT WAS UP AND DOWN IN SHORT-HOP ISLAND SERVICE, ALL DAY LONG FOR TWO DECADES -- AN AMAZING 89,680 CYCLES, OR FLIGHTS REQUIRING PRESSURIZATION.

THE ALOHA ACCIDENT SOUNDED THE BUGLE FOR INDUSTRY-WIDE AND GOVERNMENT ACTION. THE FAA VERY QUICKLY ORGANIZED AN INTERNATIONAL AGING-AIRPLANE CONFERENCE. FOUR HUNDRED ATTENDEES PONDERED, DISCUSSED, AND DEBATED AGING AIRPLANE ISSUES DURING THE CONFERENCE, WHICH WAS TO BECOME THE RALLYING POINT FOR MANY OF THE AGING AIRPLANE PROGRAMS TO FOLLOW.

CONGRESS PROMPTLY PASSED LEGISLATION TO ASSIST THE FAA IN LAUNCHING ITS NATIONAL AGING AIRCRAFT RESEARCH PROGRAM. THE AIR TRANSPORT ASSOCIATION WITH THE AEROSPACE INDUSTRIES ASSOCIATION, ESTABLISHED AN $800 MILLION PROGRAM UNDER AN AIRWORTHINESS ASSURANCE TASK FORCE.

RECOMMENDATIONS CAME FROM THE TASK FORCE QUICKLY AND A GREAT NUMBER OF THEM HAVE BEEN GIVEN THE FORCE OF LAW BY FAA'S REGULATORY DIRECTIVES.

FATIGUE ISN'T THE ONLY PROBLEM BEING ADDRESSED. CORROSION IS ALSO A SIGNIFICANT PROBLEM FOR THE WORLD FLEET, AND IT IS GETTING EQUAL ATTENTION AS PART OF THE AGING AIRCRAFT CAMPAIGN.

FAA AND INDUSTRY EXPERTS SAY THAT UNDER THE IMPROVED AGING AIRPLANE PROGRAM AIRLINES CAN FLY THEIR PRESENT JETS SAFELY AS LONG AS THEY WANT TO -- AND CAN AFFORD TO. AMERICAN AIRLINES PUT ONE OF THEIR OLDER 727S THROUGH MAJOR OVERHAUL COMPLYING WITH ALL THE NEW FAA DIRECTIVES THAT HAVE COME OUT SINCE "ALOHA", AND IT COST $546,000 IN LABOR, PLUS $286,000 FOR MATERIALS. THIS IS A TOTAL OF $832,000 FOR THE OVERHAUL WHEN THE VALUE OF THE AIRPLANE ON THE MARKET WAS ESTIMATED TO BE ABOUT $6 MILLION.

ECONOMICS IS AT THE HEART OF THE AGING AIRCRAFT ISSUE, SINCE EVERYBODY AGREES SAFETY MUST NEVER BE COMPROMISED. AND EVERYBODY INVOLVED AGREES JETS OF ANY AGE CAN OPERATE SAFELY WITH PROPER MODIFICATIONS, MAINTENANCE AND INSPECTIONS.

SAMUEL VENNERI, DIRECTOR OF MATERIALS AND STRUCTURES FOR NASA, SAYS, "IT'S A MATTER OF DOING THE RIGHT MAINTENANCE AND INSPECTION FROM DAY ONE. FROM THAT POINT, IT'S ECONOMICS. YOU CAN ALWAYS RE-SKIN THE AIRPLANE."

AIRLINES WOULD OBVIOUSLY PREFER TO REPLACE THEIR AGING AIRCRAFT WITH NEW JETS. NEW JETS ARE QUIETER, WILL MEET STAGE 3 NOISE REQUIREMENTS -- TO BE IN EFFECT LATER THIS DECADE -- WITHOUT EXPENSIVE RETROFITS; ARE MORE FUEL EFFICIENT AND; IN THE CASE OF SEVERAL OF THE NEW MODELS, CAN BE OPERATED BY A SMALLER FLIGHTDECK CREW.

THE PROBLEM IS THAT AIRPLANE MANUFACTURERS ARE STRUGGLING TO KEEP UP WITH THEIR ORDERS -- BOTH AMERICAN AND EUROPEAN MANUFACTURERS -- AND DELIVERY DATES ARE FALLING FURTHER AND FURTHER BEHIND, RUNNING TO THE END OF THE CENTURY IN SOME CASES. AT THE SAME TIME, TRAFFIC DEMAND CONTINUES UNABATED. AIRLINES MUST KEEP THEIR OLD JETS, IN ADDITION TO BUYING AND FLYING NEW ONES, IF THEY ARE TO MEET THE TRAVEL DEMAND AND STAY IN BUSINESS.

BOEING HAD EARLIER PROJECTED THAT BETWEEN 250 AND 300 JETS WOULD BE RETIRED IN 1988 UNDER THE TRADITIONAL 20-YEAR ECONOMIC LIFE THEORY. IN THIS THEORY, IT IS ASSUMED AFTER 20 YEARS OF SERVICE, IT IS MORE PRACTICAL TO REPLACE A JET WITH A NEW ONE RATHER THAN CONTINUING TO OPERATE AN OLD ONE. BOEING -- ALONG WITH A LOT OF OTHERS -- MISSED ITS PROJECTION. INSTEAD OF 250 TO 300 JETS BEING RETIRED, ONLY 60 WERE.

IN THE ENTIRE U. S. FLEET OF AIRLINE JETS TODAY, 26 PER CENT--NEARLY 1000 OUT OF A FLEET OF SOME 4000 -- ARE 20 YEARS OLD OR OLDER. BY THE MIDDLE '90'S, MORE THAN 1000 BOEING AIRPLANES ALONE WILL BE 20 YEARS OLD OR OLDER, AND STILL IN SERVICE. THEY WILL HAVE BEEN THE FIRST TO GO THROUGH FAA'S PROGRAM FOR MANDATORY INSPECTION AND "STRUCTURAL REFURBISHING."

THE QUESTION OF AGING AIRCRAFT, INTERESTINGLY ENOUGH, APPLIES PRIMARILY TO THE AIRPLANE STRUCTURE, NOT ENGINES. ENGINES CAN VIRTUALLY BE TAKEN COMPLETELY APART AND INSPECTED AND THOSE FEW SOLID COMPONENTS THAT CANNOT BE DISSEMBLED, SUCH AS THE CENTRAL TURBINE DISK, ARE LIFE LIMITED. AFTER SO MANY HOURS OF USE, THEY MUST BE REPLACED.

FAA'S NATIONAL AGING AIRCRAFT RESEARCH PROGRAM HAS BEGUN WORK IN SEVERAL AREAS, STARTING WITH A HARD LOOK AT STRUCTURAL ANALYSIS AND THAT METHODOLOGY, GOING ALL THE WAY BACK TO ORIGINAL AIRCRAFT DESIGN AND MANUFACTURE.

FAA IS EXAMINING ALL POSSIBILITIES OF TECHNOLOGY TRANSFER, BEING CERTAIN AVIATION HAS THE BENEFIT OF WHAT HAS BEEN LEARNED IN OTHER FIELDS. NASA, FOR EXAMPLE, USES THERMAL IMAGERY TO DETECT FLAWS IN ROCKET MOTORS. THIS TECHNOLOGY IS NOW GOING TO BE USED IN LOCATING DISBONDING IN AIRCRAFT SKIN, THE INITIAL FAILURE IN THE ALOHA ACCIDENT.

IDENTIFICATION OF THE BEST TECHNIQUES AND STANDARDS CURRENTLY IN USE BY ANY U. S. CIVIL AVIATION OPERATOR -- FOR MAINTENANCE, INSPECTION AND REPAIR -- IS UNDERWAY WITH THE INTENTION OF ESTABLISHING THESE SUPERIOR PRACTICES THROUGHOUT THE INDUSTRY. THE BEST PROCEDURES USED BY THE MILITARY WILL ALSO BE EXAMINED FOR POSSIBLE ADOPTION ON THE CIVIL SIDE.

HUMAN FACTORS IS ANOTHER PROMISING AREA OF FAA RESEARCH BECAUSE NOT A LOT HAS BEEN DONE AS IT RELATES TO MAINTENANCE. ATTENTION HAS LONG BEEN PAID TO HUMAN FACTORS AS IT APPLIES TO PILOTS AND AIR TRAFFIC CONTROLLERS, BUT LITTLE TO MAINTENANCE FORCES, WHO OFTEN HAVE TO WORK AT THE TOP OF SCAFFOLDING OR MOBILE TOWERS, IN THE COLD OR WITH POOR LIGHT.

CONTINUING DEMAND FOR AIRLINE SERVICE, NATION-WIDE AND WORLDWIDE, AND ECONOMICS OF THE AIRLINE BUSINESS DICTATE THE CONTINUED USE OF OLDER AIRPLANES, THOUGH, AS I SAID, IT IS MORE EFFICIENT TO OPERATE NEW ONES, WHEN THEY ARE AVAILABLE.

THE CHALLENGE IS TO MAKE THE OLDER AIRPLANES EVERY BIT AS SAFE AS THE DAY THEY LEFT THE FACTORY, EVERY BIT AS SAFE AS THE NEWEST DESIGNS ON THE LINE. THE FAA, INDUSTRY, AND CONGRESS HAVE MET THIS CHALLENGE AND ARE COMMITTED TO A CONTINUING AGING AIRPLANE PROGRAM THAT INSURES THE PRESENT HIGH LEVEL OF PASSENGER SAFETY IS NOT DIMINISHED AS AIRPLANES CONTINUE TO AGE.

LOCAL COORDINATOR'S SPEAKER'S KIT
#5 ATCS SHORTAGE
AUGUST 1990

IT IS A RARE NEWS STORY ABOUT AN AVIATION MISHAP THAT DOESN'T MENTION FAA'S "SHORTAGE" OF AIR TRAFFIC CONTROLLERS, EVEN IF THE STORY IS REALLY ABOUT PILOTS MISSING APPROACHES AND RUNNING OUT OF FUEL.

YOU CAN BE SURE THAT THE REFERENCE TO THE AIR TRAFFIC CONTROLLERS WILL RELATE THE SHORTAGE TO PRESIDENT REAGAN'S FIRING OF 11,375 OF THEM, ALL MEMBERS OF THE PROFESSIONAL AIR TRAFFIC CONTROLLERS ORGANIZATION -- PATCO -- FOR STRIKING ILLEGALLY AND IN DEFIANCE OF THEIR OATH NOT TO STRIKE. THAT WAS AUGUST 3, 1981. YES, 1981, ALMOST TEN YEARS AGO.

HOW CAN THIS BE? HOW CAN THAT SAD AND DISRUPTIVE EPISODE STILL BE NEWS, OR EVEN PART OF THE NEWS, STILL BE A MATTER OF DISCUSSION IF NOT DISPUTE?

LONG-TERM CONTROVERSY GENERALLY INVOLVES ABSTRACTS -- OPINION OR IDEOLOGY -- OR PERHAPS MATTERS THAT PEOPLE DON'T REALLY UNDERSTAND OR KNOW ENOUGH ABOUT. BUT THERE'S NOTHING MYSTERIOUS ABOUT FAA STAFFING. ARITHMETIC SHOULD PUT IT TO REST. BUT IT HASN'T BECAUSE WHILE THE NUMBERS ARE CLEAR ENOUGH, SO MUCH HAS HAPPENED -- IS HAPPENING -- IN AIR TRAFFIC CONTROL, TECHNICALLY AND PROFESSIONALLY, THAT THE EQUATION KEEPS CHANGING.

WHILE IT IS CERTAINLY POSSIBLE TO ARGUE WHETHER FAA'S STAFFING STANDARDS FOR THE AIR TRAFFIC CONTROL SYSTEM WERE JUST RIGHT PRIOR TO PRESIDENT REAGAN'S FIRING OF THE PATCO STRIKERS IN 1981, LET US START THERE OR WE'LL NEVER GET THIS SORTED OUT.

JUST BEFORE THE PRESIDENT ACTED -- 1981 -- THERE WERE 16,375 CONTROLLERS, SOME OF WHOM HAD NOT COMPLETED THEIR FACILITY TRAINING ON ALL SECTORS OR WORK STATIONS, BUT WERE OPERATIONAL CONTROLLERS NONETHELESS. CONTROLLERS WHO HAVE CHECKED OUT ON ALL THE FACILITY SECTORS OR POSITIONS ARE REFERRED TO AS FULL PERFORMANCE LEVEL CONTROLLERS -- FPL'S.

OF THE TOTAL NUMBER ON BOARD JUST BEFORE THE 1981 STRIKE, 11,375 WERE FIRED, NEARLY THREE-QUARTERS OF THE WHOLE FORCE. ALL BUT ABOUT 3000 OF THEM WERE FPL'S.

AS OF NOVEMBER LAST YEAR -- 1989 -- FAA'S CONTROLLER FORCE TOTALLED 16,984, VERY CLOSE TO THE AGENCY'S EMPLOYMENT GOAL OF 17,000. IN ANY CASE, THERE ARE MORE CONTROLLERS ON BOARD NOW THAN THERE WERE BEFORE THE PATCO STRIKE, THOUGH THE FPL RATIO IS LOWER THAN IT WAS.

SO IS THERE A SHORTAGE OR NOT? WELL, LET'S TALK ABOUT THIS. IT ISN'T EASY.

THERE ARE INDUSTRY AND AIRLINE EXPERTS IN THE ATC FIELD WHO THINK THERE IS A SHORTAGE. SOME MEMBERS OF CONGRESS ARE VERY UNEASY ABOUT IT AND HAVE EVEN CRITICIZED FAA FOR NOT BEING FORTHCOMING ON THE PROBLEM.

AND, HARDLY SURPRISING, THE NEW CONTROLLER UNION THINKS THERE IS, DESPITE THE FACT THAT THE ONBOARD TOTAL IS HIGHER THAN IT WAS BEFORE THE STRIKE AND WITHIN ONE PERCENT OF THE AGENCY'S GOAL.

GENERALLY THOSE WHO ARGUE THERE IS A SHORTAGE POINT OUT THAT AIR TRAFFIC HAS INCREASED NATION-WIDE AT LEAST 30 PER CENT IN THE YEARS SINCE THE STRIKE, THAT BASICALLY THE SAME NUMBER OF CONTROLLERS ARE NOW BEING ASKED TO HANDLE A THIRD MORE TRAFFIC. AND IN SOME AREAS, THEY POINT OUT, SUCH AS NEW YORK, THE INCREASE IN TRAFFIC VOLUME HAS BEEN MORE THAN 50 PERCENT.

THOSE WHO ARGUE THERE IS A SHORTAGE ALSO POINT OUT THE RATIO OF FPL'S TO THE TOTAL CONTROLLER CORPS IS LOWER THAN IT WAS PRIOR TO THE STRIKE. THAT IS TRUE -- ABOUT 10,260 FPL'S NOW OUT OF A TOTAL OF APPROXIMATELY 17,000 CONTROLLERS, COMPARED TO 13,000 OUT OF 16,375 IN 1981. INCREASING THE PERCENTAGE IS AN AGENCY PRIORITY.

NO ONE WOULD ARGUE THAT IT ISN'T DESIRABLE TO HAVE AS HIGH A PERCENTAGE OF FPL'S AS POSSIBLE IN A FACILITY BECAUSE THEY ARE CHECKED OUT ON ALL THE SECTORS AND STATIONS AND CAN PERFORM WHEREVER THEY ARE NEEDED. STAFFING ASSIGNMENTS ARE SIMPLER AND MEETING UNPLANNED TRAFFIC DEMAND IS EASIER.

THIS DOES NOT MEAN, HOWEVER, THAT A CONTROLLER WHO IS NOT YET AN FPL IS IN SOME WAY INCOMPETENT ON A SECTOR OR POSITION ASSIGNED. THE GREATEST NATURAL-BORN CONTROLLER IN THE WORLD -- LET US SAY ONE JUST TRANSFERRED FROM A SMALLER FACILITY TO ONE OF OUR 20 AIR ROUTE TRAFFIC CONTROL CENTERS OR A MAJOR TOWER -- WON'T BE AN FPL UNTIL FACILITY ORIENTATION, TRAINING AND CHECK-OUTS UNDER SUPERVISION ARE COMPLETED.

THAT MAY TAKE A COUPLE OF YEARS. WHILE THIS PROCESS IS GOING ON, THE CONTROLLER -- STILL NOT AN FPL--CAN HANDLE POSITIONS AS SOON AS QUALIFICATIONS FOR THOSE SPECIFIC POSITIONS ARE MET.

ON THE OTHER SIDE OF THE "SHORTAGE" ARGUMENT, THERE ARE FEWER ATC FACILITIES TO STAFF THAN THERE WERE BEFORE THE STRIKE. EIGHTY ONE TOWERS, ALL WITH RELATIVELY LOW TRAFFIC VOLUMES, WERE CLOSED BY THE AGENCY DURING THE EMERGENCY PERIOD SO CONTROLLERS COULD OPERATE BUSIER FACILITIES. FIFTY EIGHT OF THEM HAVE BEEN REOPENED, THAT IS, PUT BACK IN OPERATION BY FAA. NINE HAVE BEEN DECOMMISSIONED AND 14 REMAIN TEMPORARILY CLOSED.

POWERFUL NEW COMPUTERS HAVE MADE POSSIBLE PROGRAMS IN RECENT YEARS THAT HAVEN'T REPLACED CONTROLLERS, BUT WHICH AUTOMATICALLY MAKE THE SYSTEM MORE EFFICIENT AND PROVIDE ADDITIONAL SAFETY MARGINS.

PERHAPS THE MOST DRAMATIC IS THE CONFLICT ALERT PROGRAM. AN ALERT SIGNAL FLASHES ON THE CONTROLLER'S RADAR SCOPE SHOULD TWO OR MORE FLIGHTS BE PROJECTED TO BE FLYING ON COLLISION COURSES.

CREATION OF THE CENTRAL FLOW CONTROL SYSTEM, WHICH PERMITS THE AGENCY TO MANAGE AIR TRAFFIC ON A NATIONAL BASIS, IS ANOTHER GREAT ADVANCE MADE PRACTICAL BY THE POWERFUL NEW COMPUTERS. WITH "CENTRAL FLOW," IT IS POSSIBLE TO AVOID MANY DISRUPTIVE BACK-UPS AND DELAYS PERHAPS DUE TO WEATHER MORE THAN HEAVY TRAFFIC.

THESE SNARLS, WHATEVER THE CAUSE, COMPLICATE THINGS DRAMATICALLY FOR CONTROLLERS WHO HAVE TO REROUTE FLIGHTS OR MAINTAIN THEM IN HOLDING PATTERNS, A SITUATION DESIGNED FOR STRESS.

"THE WHOLE ENVIRONMENT HAS CHANGED SINCE EVEN THE TIME OF THE CONTROLLERS' STRIKE," ED HARRIS, FAA EXECUTIVE DIRECTOR OF SYSTEM OPERATIONS, TOLD THE NEW YORK TIMES. "WITH FLOW CONTROL, WE'RE MANAGING A NATIONAL SYSTEM INSTEAD OF BEING LOCALLY ORIENTED."

OTHER AUTOMATION PROGRAMS ARE SCHEDULED IN THE NEXT FEW YEARS, INCLUDING COLOR-CODED DISPLAYS OF TRAFFIC AND WEATHER, AND DATA LINK.

WITH THE DATA LINK SYSTEM IN PLACE, CRITICAL INFORMATION, SUCH AS CLEARANCE INSTRUCTIONS FOR A FLIGHT, OR THE LATEST WEATHER, WILL APPEAR ON A SMALL SCREEN IN THE COCKPIT WITHOUT A WORD BEING SAID. NOT ONLY WILL A LOT OF CLASSIC CONTROLLER-TO-PILOT RADIO TRANSMISSIONS BE ELIMINATED, BUT THE CHANCES OF ERROR OR MISUNDERSTANDING WILL BE GREATLY REDUCED.

A PRE-DEPARTURE CLEARANCE SYSTEM IS CURRENTLY BEING TESTED AT CHICAGO'S O'HARE AIRPORT AND AT DALLAS-FORT WORTH.

WHILE FAA TAKES THE POSITION THAT STAFFING LEVELS ARE JUST ABOUT RIGHT NATIONALLY, IT DOES ACKNOWLEDGE THAT THERE ARE PROBLEM AREAS.

THE CENTER AND TOWER AT CHICAGO -- O'HARE -- ARE TWO. GETTING CONTROLLERS TO WORK IN THESE CRITICAL FACILITIES, AND LIVE IN THE CHICAGO AREA WITH ITS INFAMOUS WINTERS, IS VERY DIFFICULT.

THE CENTER AND TERMINAL RADAR CONTROL FACILITY AT NEW YORK ARE JUST AS BAD. IT ISN'T JUST SNOW AND ICE, THOUGH. LOS ANGELES AND OAKLAND ARE ALSO TOUGH TO STAFF.

TO MEET THIS PROBLEM, FAA HAS BEEN AUTHORIZED BY THE CIVIL SERVICE TO TEST FOR FIVE YEARS OFFERING A 20 PER CENT BOOST IN BASIC PAY FOR CONTROLLERS WORKING IN DIFFICULT BUT CRITICAL LOCATIONS. IT MEANS THAT CONTROLLERS AT THE GS-13 LEVEL WOULD AVERAGE $50,000 A YEAR.

FAA DOES ACKNOWLEDGE THAT STAFFING IS NOT UP TO THE MARK IN SOME LOCALITIES -- NEW YORK, CHICAGO, LOS ANGELES AND OAKLAND PRIMARILY -- AND DOES ACKNOWLEDGE THAT USE OF OVERTIME THERE IS GREATER THAN WE WOULD LIKE. THE AGENCY IS DOING WHAT IT CAN TO GET CONTROLLERS TO GO AND WORK IN THESE LOCATIONS THROUGH INCENTIVES -- THEY CAN'T BE ORDERED TO GO --BUT IT IS SLOW GOING.

IN THE MEANTIME, THE NATIONAL AIRSPACE SYSTEM IS REGARDED BY ALL THE INVOLVED INTERESTS -- GOVERNMENT AND INDUSTRY, WITHOUT EXCEPTION -- AS SAFE AND INCREASINGLY PRODUCTIVE. THAT INCLUDES NEW YORK, WITH ITS DIFFICULT, AND PERENNIAL, STAFFING PROBLEMS. THERE HAS BEEN NO INCREASE THERE IN THE NUMBER OF CONTROLLER ERRORS IN RECENT YEARS. MANY BELIEVE THE SYSTEM NATION-WIDE IS ACTUALLY SAFER THAN IT EVER HAS BEEN, DESPITE THE INCREASE IN TRAFFIC.

WE CAN ALL HOPE THIS IS TRUE BECAUSE THERE IS NO END IN SIGHT TO INCREASING LEVELS OF AIR TRAFFIC. FAA TOWERS WILL BE HANDLING 28 PER CENT MORE TRAFFIC BY THE YEAR 2000; THE AIR ROUTE TRAFFIC CONTROL CENTERS, ABOUT THE SAME.

EVEN SO, FAA BELIEVES THAT AS MORE ELEMENTS OF THE $15 BILLION NATIONAL AIRSPACE SYSTEM PLAN BECOME OPERATIONAL IN THE NEXT DECADE, THE RISING TRAFFIC DEMAND WILL BE MET. IT ALSO BELIEVES THE STAFFING LEVELS NATIONALLY, IF NOT IN EVERY LOCATION, ARE ABOUT RIGHT FOR THE EVOLVING NATIONAL SYSTEM.

TO MANY PEOPLE, AIR TRAFFIC CONTROLLERS SYMBOLIZE FAA, THOUGH OUR INSPECTORS, TECHNICIANS AND OTHERS MAY GRUMBLE. IT SHOULDN'T BE SURPRISING, THOUGH. CONTROLLERS MAKE UP NEARLY A THIRD OF THE ENTIRE AGENCY.

FAA WILL ALWAYS HAVE A STRONG CONTROLLER CORPS. THE INCREASINGLY AUTOMATED NATIONAL AVIATION SYSTEM -- THE SYSTEM OF THE FUTURE--IS DESIGNED WITH CONTROLLERS VERY MUCH A PART, THOUGH THEIR ROLE WILL BE CHANGING -- LESS TALKING INTO MICROPHONES AND DIRECTING, AND MORE MANAGING OF MACHINES AND INFORMATION.

GETTING THE RIGHT NUMBER OF THESE TALENTED PEOPLE IN THE RIGHT PLACES AS THE SYSTEM EVOLVES, IS THE PROBLEM. FAA HAS MANAGED SIMILAR "SEA CHANGES" IN AIR TRAFFIC CONTROL BEFORE AND IS WELL ON THE WAY TO DOING IT AGAIN.